IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor J. Alexander Marchosky   Art Unit 3686
Serial No. 10/729,082
Filed December 5, 2003
Confirmation No. 8835
For RECORD SYSTEM
Examiner Hiep Van Nguyen

October 6, 2009

DECLARATION OF PRIOR INVENTION UNDER 37 C.F.R. §1.131

I, Dr. J. Alexander Marchosky, declare as follows:

1. I am the sole inventor of the subject matter claimed in the above-entitled United States Patent Application Serial Number 10/729,082 ("the '082 application"). The '082 application claims priority to U.S. Patent Application Ser. Nos. 10/253,194 and 09/910,190 and U.S. Provisional Application Serial No. 60/219,773 ("the '773 application), of which I am the sole inventor.

2. I am submitting this Declaration to establish conception of the invention in the United States of at least some of the subject matter recited in pending claims 1, 20, 32, 35, and 37 of the '082 application prior to February 9, 2000, the earliest priority date of U.S. Patent Application Publication No. 2001/0041991 (Segel), coupled with diligence from prior to such date to the filing date of the '773 application. I am also establishing conception of the invention in the United States of at least some of the subject matter recited in pending claims 1, 20, 32, 35, and 37 of the '082 application prior to May 23, 2000, the earliest priority date of U.S. Patent Application Publication No. 2001/0049614 (Rice), coupled with diligence from prior to such date to the filing date of the '773 application. In addition, I am establishing conception of the invention in the United States of at least some of the subject matter recited in pending claims 1, 20, 32, 35, and 37 of the '082 application prior to December 23, 1999, the earliest priority date of U.S. Patent Application Publication No. and 2001/0032100 (Mahmud), coupled with diligence from prior to such date to the filing date of the '773 application.
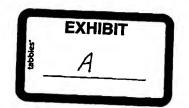
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3. I was not aware of U.S. Patent Application Publication Nos. 2001/0041991 (Segel), 2001/0049614 (Rice), or 2001/0032100 (Mahmud) prior to the filing of the '773 application.

4. Exhibit A, attached hereto, provides facts and evidence in support of this Declaration. Exhibit A is a revised invention disclosure disclosing at least some of the subject matter of my present invention embodied in pending claims 1, 20, 32, 35, and 37 in the '082 application. Although I prepared earlier versions of the disclosure, the version shown in Exhibit A has an earliest creation date of August 28, 1999, which is after the conception date of my invention.

5. In addition to preparing invention disclosures in the months preceding preparation of Exhibit A, I have retained notes from periods of earlier development and problem solving related to the subject matter of my present invention embodied in pending claims 1, 20, 32, 35, and 37 in the '082 application. An example of the aforementioned notes is attached hereto as Exhibit B. Although the date identified in Exhibit B has been blocked out, I hereby declare this date on which I prepared these notes, which is after the date of conception of my invention, is prior to December 23, 1999.

6. I worked with my legal counsel in the preparation of the '190 application from before October 1999 until the filing of the '773 application on July 20, 2000. I received a draft set of claims from legal counsel in a letter dated November 19, 1999, a first draft of the application in a letter dated April 17, 2000, and a second draft of the application in a letter dated July 11, 2000. I reviewed each draft and provided feedback and answers to questions in an attempt to place the application in form for filing.

7. I further declare that all statements made herein are of my own knowledge and are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false

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statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

_____
Dr. J. Alexander Marchosky

10/06/2009
Date

LMH

08/28/99
mod 9/11/99

Medical history (mhx) taking, recording, correlating with past history (ph), laboratory results (labs), medications (meds), side effects, updating, emergency recalling, availability and transportability is an undeveloped market. The task is daunting because of the difficulty in obtaining, maintaining, correlating the information and protecting access. Solving the multiple difficulties and organizing a user friendly service may be rewarding, but at the same time a significant challenge that may ever be a work in evolution, subject to available technology and ongoing experience. The system is voluntary; therefore, additions, deletions and modifications are all individually controlled.

For the individual, the benefits are:
1- the ready availability of a chronological register of his/her lifelong medical history
2- the ready availability of an electronic, free, continuously available, confidential, personal medical consultant
3- potential reduction in the need for medical services
4- protection from conflicting therapies
5- unbiased referral service

An approach to the conundrum is proposed here. It involves breaking each one of the sectors into individual and independent units, yet, allowing correlative activity between the parts in a controlled and non obvious manner so that restrictions to access can be maintained while at the same time being able to serve all the potential users of the system. Hyperlinks for symptoms, signs, diagnostic, medical and surgical therapies, and medical, pharmaceutical, scientific dictionaries, thesaurus, sources and references are made available for as much inquiry as desired. Progression can be hierarchiasized to satisfy different levels of sophistication.

The following systems need to be included:
1- Registration
2- Identification
3- Accessibility permits
4- System for self-supplied mhx
5- Systems for self/ or health care provider (hcp) recording information (lab, pathology [path] and radiology [rad])
6- System for analysis and correlation of symptoms (sxs)
7- System for disease/symptom oriented treatise (i.e. Merck Medical Manual, etc,)
8- System for differential diagnosis (ddx)
9- System for therapeutic recommendations
10- System for recording actual therapy
11- System for predicting outcome based on provided information
12- System for recording actual outcome
13- System for mental health and counseling

14- System for dental and oral care and surgery
15- System for social services and welfare
16- System for cumulative recording of radiological studies
17- System for cumulative recording of laboratory studies
18- System for referral to hcp
19- System for evaluation of hcp
20- System for monitoring hcp
21- System for user notification of due dates
22- Genealogy tree development
23- Genetic history development
24- Medical, pharmaceutical, biologic, scientific dictionaries, thesaurus, etc.

Requirements include:
1- Immense data collection and correlation capability
2- Easy portal accessibility
3- Multilevel security system
4- Multiple specialist input and periodic upgrading
5- Acquisition of proprietary information and sources

It is understood that implementation will take an extended period of time with each segment becoming integrated as development and finances permit. Information storage, though not by itself difficult, will prove an immense task. Longevity of information, upgrading of systems with integrity of information and accessibility will be a daunting and ever challenging activity. Information management and correlation will require neural networking.

REGISTRATION:

Each individual will have his/her own folio. Only the individual or his representative (parents of under age child) can register. It is envisioned that eventually most of the people will be registered at birth and the life medical history maintained henceforth. In order to maintain uniqueness of file, identifying data may include:

1- Full name (without abbreviations)
2- State or country of birth
3- Birth date (dd/mm/yyyy)
4- Social security number (SSN)
5- Biometrics identifiers (BID)
    a- fingerprint(s)
    b- retinal or ocular image
    c- voice pattern (with or without a key verbal code)
    d- DNA print
    e- others
6- Personal identification number (PIN)

By utilizing variables of the registration information, different levels of access and security can be offered. Folio identification would require as a minimum the input of 1+3+4. Adding 2 plus a hcp's access number (a#) (i.e. BNDD + State license number, etc.) may allow access to past history (ph) sections, whereas a pharmacists a# will allow access to medications and allergies section only. The use of identification by accessor will leave a traceable and registered chronological history. Making access information available to the registrants – on a demand v/s periodic notification- should represent a significant reassurance to the registrants of the confidentiality of their files.

For authorized alterations, additions or deletions (aa/d) to the mhx, which may be made by the individual or his hcp, the use of PIN or a biometrics ID, would be required. Otherwise, the entry would be considered unconfirmed aa/d. Only after the individual's confirmation would the entry be considered official (color-coding unconfirmed information would serve the purpose). Idem for meds, labs, etc.

As an extension of the above, a magnetic strip card (a la VISA or MasterCard) could be issued individually and contain all of the identifying information; a PIN (or biometrics ID) would then allow entry into the records. Sensitive information could be protected in controlled access areas, file opening would require reentry of the PIN to permit viewing and an additional PIN entry to permit copy or transfer. This system could address major concerns about safety and disclosure of information.

Two main modes of data acquisition are envisioned:
1- Interactive interview or inquiry --ii
2- Directed data acquisition –dda

DIRECTED DATA ACQUISITION (dda):
This represents all data acquired by direct input of information, and not by ii. Examples include vaccinations, birth and developmental data, previous dxs and rxs, present and past medications and therapies, surgeries and findings, pregnancies and deliveries, review of systems, habitual and social history, family history, etc.

DIAGNOSTIX:
This would be the free, confidential, personal, continuously available consultant. Individual registration not required; information could also be made available for the personal folio by properly registering and requesting the recording.
The "interview" would be interactive (ii), with multi-looped pathways that would direct and simultaneously weight the offered information. Entry of single or multiple symptoms, signs, conditions, diagnosis, medications, or treatments, initiates the interaction. Laboratory, radiology, or pathology information is integrated as available (dda).

Potential differential diagnoses are offered in list form from most to least likely. **The working premise is that with sufficiently detailed elicited information, and without the benefit of a physical exam, it is highly probable to arrive to a reasonable and correct diagnosis.**

Recommendations, including further inquiries, tests, or consultants are posted. Local, regional, and national hcp listings are posted with further pathways for deeper exploration of credentials, etc.

Starting from simpler to more complex pathways, different levels of sophistication are addressed and satisfied. The interview would be constructed in a clinical format, asking for what, how, when, what, where and why exhaustively, to reach potential diagnosis. Diagrams and illustrations (body, system, function, etc) are part of the question, requiring individual interaction. Degrees of intensity, frequency, duration, etc., can be digitized and/or color-coded for estimation of severity. Sidebar illustration or diagrams are used to clarify questions or guide responses. Hyperlinks are used to define, clarify, amplify terms, conditions, diagnosis, recommended therapies, etc. Tri-dimensional and holographic imagining to illustrate questions and answers, nearly possible already with present technology, may represent a major asset.

Drug reference sources, i.e., PDR, toxicology, etc, are part of the immediately available information. In addition, correlation with treatment and side effects can be rapidly interconnected. Adding commentary by experts on recent advances in diagnosis or therapies, including experimental work (using pro and con sides) can be very attractive enhancers. The latter should be clearly labeled as information in progress.

Commercial ads from drug companies, laboratories, hcps, hmos, etc are strategically posted in appropriate spots. Brand name identification in therapeutic recommendations can be sold as advertisement. These are potential sources of income to support the service. Flat fees or hit related fees can be considered. Disclaimers or explanatory footnotes are used to distance the advertisement from the serious purpose of the recommendations. No direct benefit should be accrued of the sales generated by the advertisement to prevent conflict of interests.

Acquiring the rights to published information (i.e, Merck Medical Manual, PDR, etc.), including upgrades, is paramount in terms of relevance and authority.

The interactive multi-looped interview will require the input of many specialists. To attain efficiency, practicality and balance, each section will require input from academic and non-academic personal. Physicians, nurses, therapist, counselors, clergy, etc. are considered specialist in their areas or sections.

MARKETING:

Attracting individuals to the portal and recurring hits are paramount to attracting advertisers. Health will always be an area of intense individual interest. Nearly everyone,

to variable degrees, is interested and reasonably or unreasonably paranoid about his own health. The interview and published material are all made free for this purpose. The availability in one portal of all the information plus the interactive process should appeal to a substantial segment of the population. By offering a reasonable pathway to dx and rx, guiding and reassuring the users may result in substantial reduction of unnecessary health care utilization; these should be attractive to HCFA, hmos, insurance industry, etc. Sponsoring grants or actual fees may be negotiable.

The referral system would require active enrollment and maintenance, sellable to the providers (i.e. similar to charges for phone book advertisement). Transfer of recorded medical history to a hcp for his/her records, which would satisfy the requirement of a full history taking –and therefore, an upgrade in the fee code- could generate access fees. Because of the individual responsibility for the input and maintenance of information, a reliable medico-legal document could be had by the hcp in case of challenges to the amount or quality of the information offered for evaluation.

With the rapid and extensive pharmaceutical armamentarium available, and everyday increasing, it has become difficult for hcps and patients to keep tract of the drugs taken in the past and the present, their generic equivalents, interactions and side effects. This is further compounded by the increasing inclusion of over the counter drugs, herbs, etc. that many individuals intake regularly but do not consider part of their "medicines" and neglect to inform their hcps. By providing a central registry and a rapid analysis and correlation system, prompt warnings regarding interactions, side effects, previous use and effectiveness or lack of efficacy can be extremely useful and beneficial. Differentiating between intolerance, side effects or true allergies to drugs can be another important contribution.

Terminals could be placed in the offices of hcps for the individual mhx generation prior to physical examination, interview or therapy. This would allow the individual to update information periodically on a timely basis. All these activities could generate a fee per transaction.

Individual registration and folio maintenance should be a fee source. Either a lifelong up-front fee or a yearly fee could be collected. Transfer of folio information or access by hcp or hospital could generate a fee. Different system services could also generate fees.

A further extension of this service would be a lifelong biographic and biologic registry. As is well known, even the most interested and compulsive of people lack the discipline and perseverance to maintain a record of their lives. Many important pieces of data are forgotten, remembered inaccurately, or confused chronologically. Allowing long term compilation of data would facilitate chronological or correlative analysis which presently is mostly non existent. With the ever increasing mobility and traveling of individuals and families, with the breakdown of roots and family connections, and with the advances in science, extensive knowledge of genealogy, genetics, environmental and biologic events becomes important and sometimes crucial in the differential diagnoses and therapy. In

example, knowing the genealogy and place of origin of an individual may facilitate locating someone with similar genetic makeup for organ or tissue acquisition or transplantation (i.e. stem cells, etc.). Another example would be an environmental exposure, discovered many years after the event and its correlation to diseases or conditions that appear unrelated until the correlation is made of biography, location and exposure.

As it should be apparent by now, the amount of information to handle, store and access is massive. This would require enormous technical resources. Alliances with technical companies would be one way to achieve the task. The financial viability could be enhanced by also providing an electronic storage service to hcps. Handling and storing all the information related to each one of the patients is becoming increasingly costlier to hcps (equipment, space, personnel, technicians, etc). Providing the computer-modem equipment to each hcp on a flat rental + frequency of access basis; this would include hardware and software maintenance and could generate substantial fees. Not only would it reduce overhead for the hcps, but would also relief them of the burden of security of the records.

A feature that may attract a daily audience could be a medical consulting column, similar to the ones seen in newspapers, were one to three conditions are discussed form a lay perspective and language, usually responding to a letter request. Hyper-linking to more extensive and in depth explanations and illustrations may be a major advantage over the printed media.

Because of the universality of the method herein described, once a single language (i.e. English) system is developed, accurate, idiomatic translation into any language should be realizable at small cost. Translation of an interview from a foreign language into English (or any other language) would facilitate intercultural interaction.

Programs:

I-   Questioner
II-   Algorithm
III- Stratification
IV-   Weight analysis

I-Questioner: By developing a standard questioner that can be codified, digitized and easily recorded, a system can be developed that is applicable to any condition queried. Not all question need to be applied to each query, some question may require repetition at different points in the process to ascertain the validity and consistency of responses, and confirm interviewee understanding of the question. The approach should make the process programmable, statistically analyzable and standardizable. Six areas need to be considered, divided into sectors, subsectors, section and subsection as follows:

1-What
2-Where
3-When
4-Whom
5-How
6-Why

II Algorithm: By using a code of at least ten digits (although more digits may eventually be necessary) a scheme can be develop to codify the questions to allow programmation. By combining the coded questions a full historical interview may be obtainable. With sufficient reiterations a 99 percent certainty can be reached towards the correct diagnosis being included in the differential. For example:

The following codes can be used to represent the answer and be prefixed, or preferably, suffixed to the answered question and used for the evaluation:

000= no
111= yes
001= neither
011= both or all
100= and
010= none
110= or

The questions are grouped by symptoms and signs organized into organs or systems. Given a single or a multiplicity of sxs, each sx is addressed independently at first. Lists of grouped characteristics of each sx are presented for selection (yes or no for each alternative). Subsequent questions refine the elicited characteristics with yes or no answers. Fully realized sx description is presented, including all the positives and pertinent negatives for approval (yes or no). Idem for each sx. Finally the compended sx description is presented for approval (yes or no). A differential dx is then presented in hierarchical order.

Sectors:
0000000001 to 0000000100= pain
0000000101 to 0000000200= pain
0000000201 to 0000000300= cough and expectoration
0000000301 to 0000000400= chills and sweats
0000000401 to 0000000500= weight
0000000501 to 0000000600= malaise
0000000601 to 0000000700= temperature
0000000701 to 0000000800= sensory
0000000801 to 0000000900= motor/muscle
0000000901 to 0000001000= visual

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0000001001 to 0000001100= auditory
0000001101 to 0000001200= olfactory
0000001201 to 0000001300= taste
0000001301 to 0000001400= cognitive
0000001401 to 0000001500= consciousness
0000001501 to 0000001600= coordination
0000001601 to 0000001700= balance
0000001701 to 0000001800=convulsions/epilepsy
0000001801 to 0000001900= convulsions/epilepsy
0000001901 to 0000002000= headache
0000002001 to 0000003000= headache
0000003001 to 0000004000= growth
0000004001 to 0000005000= growth
0000005001 to 0000006000= skin
0000006001 to 0000006100= ears
00006101 to 00006200= eyes
00006201 to 00006300= nose
00006301 to 00006400= tongue
00006401 to 00006500= mouth
00006501 to 00007000= teeth
00007001 to 00008000= neck
00008001 to 00008100= chest
00008101 to 00008200= breast
00008201 to 00008300= breast
00008301 to 00008400= heart
00008401 to 00008500= heart
00008501 to 00008600= heart
00008601 to 00008700= circulation
00008701 to 00008800= circulation
00008801 to 00008900= circulation
00008901 to 00009000= lungs
00009001 to 00009100= lungs
00009101 to 00009200= respiratory
00009201 to 00009300= respiratory
etc.
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Subsectors:

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0000000001 to 0000000010= acute pain
0000000011 to 0000000020= sub-acute pain
0000000021 to 0000000030= chronic pain
0000000031 to 0000000040= constant pain
0000000041 to 0000000050= sharp pain
0000000051 to 0000000060= throbbing pain
etc.
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Sections:

0000000001 to 0000000002= localized/diffuse acute pain
0000000003 to 0000000004= localized/diffuse sub-acute pain
0000000005 to 0000000006= localized/diffuse chronic pain
etc.

Subsections:

0000000001= localized acute pain
0000000002= diffuse acute pain
0000000003= localized sub-acute pain
0000000004= diffuse sub-acute pain
0000000005= localized chronic pain
0000000006= diffuse chronic pain
etc.

EXAMPLE:

Presenting symptoms: *headache, fever, vomiting, feeling awful*

By correlating subsections of different sectors and diagrams, in a pattern of the 6 basic questions, sufficient information can be generated to reach, by logical progression of inclusion, potential diagnoses that can be ranked from most likely to least likely. This can be viewed in reverse, that is, by eliminating what is not, what is left is what it may be in the order of least to most likely.

Sex	Male yes	Female yes

Age

WHERE — What part of the head aches?

yes	Front	no
yes	Back	no
yes	Right side	no
yes	Left side	no
yes	All	no

WHAT — Is the pain acute (of very rapid onset or development)?

0000000001

yes	no
111	000

WHERE   Is the acute pain localized (restricted to one area or part of
                                 the body)
                                         0000000001

                                 yes   no
                                 111   000

Answering yes to the first 2 questions immediately eliminates 0000000002 to
0000000006. On the other hand, answering no to the first questions brings up
0000000003, etc.

By using body diagrams (which are digitized for patterns) anatomic localization and
symptom description can be matched, narrowing diagnostic alternatives.

Analysis:

Segregation of yes's in one column and no's in another initiates the ddx. By matching the
yes's with all potential dx codes, the unmatched are eliminated; these represent the
positive findings. By matching the no's to the potential codes the unmatched are
eliminated; these are the negative findings that further help define the ddx.

Various combinations of positives (111) are given different relative weights; idem for
combinations of negatives (000).

The positive findings are used to select all the potential dx. The negatives are used
eliminate potential dxs and to compliment the positives; the combination of positives and
negatives suggest all the potential dxs.

The relative weights assigned to different positive combinations set a hierarchy. The
negatives are used to degrade the relative weights assigned. At the end, a hierarchically
arranged list of dxs are presented that should include the correct dx in at least 99% of the
occasions.
Because the interview is occurring simultaneously to the analysis, reiterative questioning
can be generated to re-asses the weight of potential combinations to confirm or refute
analytical assumptions. The reiterative questions become progressively more complex
and complete, refining the dx.

Because the PC's and the internet speed have increased enormously – and will continue
to increase- the interchange will appear to be a real time event. Absent an intimidating
interviewer (i.e. hcp) and surroundings, time pressure or other constraining factors, it
could be argued the interviewee would be able to provide more accurate and reliable
answers. The interaction could be used as a practice prior to a real encounter, as a
supplementary or a substitute interview –which would be delivered to the hcp, or as a
check on the performance of the hcp.

Account must be made of the individual who will try to confuse the interview by providing false, incongruent data. Fabricated and incongruent data may lead to the impossibility of reaching a dx. Manipulated data may lead to a wrong dx. Anticipating the latter two, a caveat is posted at the beginning of the interaction warning of the possibility and disclaiming responsibility.

WHAT IS CLAIMED:

1- A method for interactively interviewing any person(s), via electronic or any other medium of communication, eliciting symptoms or signs of illness, malaise, unhealthiness, or unwellbeing to reach reasonable and logic diagnosis, differential diagnoses, recommended further diagnostic procedures, and recommended therapeutic modalities for each one of the potential diagnoses.

2- The method of 1, consisting of a sequence of interrogatories guided towards eliciting features and characteristics of each one of the described symptoms and signs reported by interviewee. The sequence of questions aims to verify the symptoms and signs, their frequency, intensity, duration, repetition, periodicity, association among themselves and association with circumstances, activities, environmental, nutritional, physical, chemical, emotional, biologic and psychic influences.

3- The method of 1, utilizing sequential, repetitive and recycling, interweaving, combinations of six basic questions, as follows: what, where, when, how, whom, why. By exhaustively extracting all the elicitable features and characteristics of symptoms and signs, a reasonable probability of causation can be reached in a hierarchical order. Variations and modifications of the six basic questions are utilized until sufficient information is available to include all possible and exclude all impossible causes.

4- The method of 3, proceeding from the more general to the more specific of the elicitable features and characteristics, by utilizing variations and modifications of the six basic questions.

5- The method of 3, whereby questions can only be answered in the positive –yes- or in the negative –no-, without any further elaboration by the interviewee. All further elaboration on the features and characteristics are elicited proceeding questions requiring the same type of positive –yes- or negative –no- answer.

6- The method of 1, were the elicited information is given differential weights, according to the extracted features and characteristics, to allow inclusion of as many potential diagnoses as can be recognized. The differential weights would establish a hierarchy of probability.

7- A method for codifying the questions, beginning with the more general and ranging to the more specific, to permit computable analysis of the elicited information. Each possible question is assigned one unique multidigit number.

8- A method for codifying the answers, yes and no, with unique multidigit numbers.

9- A method for prefixing or preferentially suffixing the coded answers to the coded questions, thereby permitting segregation of the positively and the negatively answered questions.

10- A method for coding all the potential diagnoses with unique multidigit numbers.

11- A method for coding all the potential symptoms and signs with unique multidigit numbers.

12- A method for collating the coded answers with the coded symptoms and signs thereby excluding all the impossible diagnoses.

13- A method for assigning weights to the coded answers and symptoms and signs to hierarchically organize all the potential diagnoses from the most to the least likely.

14- A method for hyperlinking the probable dxs. with available illustrative information regarding the condition and the recommended diagnostic tests and therapies.

15- A method for establishing sole and unique identity of an individual conducting a medical query so that the information volunteered and the results of the query remain private and confidential, yet releasable and transferable upon proper verification of identity and permission to release the information as directed.

16- A method for cumulatively accruing information related to the uniquely identified individual –directed data acquisition (dda)- in a chronological and/or categorical folio.

17- A method for uniquely identifying individual registering into the provided services by utilizing a combination of :
        1-Full name (without initials)
        2-Bithday (dd/mm/yyyy)
        3-Bith place (state and/or country)
        4-PIN (personal identifying number or word)
        5-Biometrics data:
                !) fingers print
                2) voice print
                3) retinal prints
                4) DNA
                5) other

18- A method for identifying and recording chronologically all inquirers or access of the uniquely recorded data of an individual. Prior authorization required for access is also traced.

19- A method for correlating diagnoses with appropriate information, services, resources, at local, regional and national levels.

20- A method for offering all of the above described methods –1 to 19- in any individuals native language and translating the information, questions and answers, into any other language to permit intercultural exchange of information.

21- A method for periodically notifying the individual of datelines (for medications, laboratory studies, medications, etc).

2- A method for computer codifying all the parameters, contract stipulations, regulations, limitations, allowances, requirements and characteristics of an insurance company to allow computerized verification of claims.

3- A method for computer codifying all the parameters, contract stipulations, regulations, limitations, allowances, requirements and characteristics of an insurance company to allow computer generated pre-approval, approval, verification of eligibility of services, in a expeditious and confidential manner.

4- A method for computer codifying all the parameters, contract stipulations, regulations, limitations, allowances, requirements and characteristics of an insurance company to allow computer generated payment for services.

5- A method for computer codifying all the parameters, contract stipulations, regulations, limitations, allowances, requirements and characteristics of an insurance company to allow computer generated verification of performance of services as approved and/or billed. This process requires identity-confirmed verification from the recipient of services.

Even with the above checks, a patient and an hcp could agree to abuse the system. Single or multiple violations may escape detection; however, patterns of abuse may eventually become evident; substantial deviations from patterns of other hcp's would automatically be culled out, permitting close scrutiny of activity and much earlier detection of fraud than occurs now. One potential remedy, for example, could be requiring a second opinion or review by an independent consultant selected by the third party payor or the obtaining of laboratory studies to confirm a disorder or the intake of medications, etc. This would be more cost effective than what is available now.

Because of the explosive growth of medications, alternative brands and generics, there is a real risk that even the best informed and intentioned of hcps would miss an unintended interaction or secondary effect of a medication added to other medications already in use or to an underlying condition. By integrating all the available information for a given patient and recurring to massively stored drug information, undesired events could be significantly reduced, albeit not eliminated completely. The latter due to the inability to infallibly predict all the potential reactions of one particular individual to a given biochemical combination. In spite of the caveat, the potential savings in terms of reduction of iatrogenic injury, wasted medications or therapies, and prevention of costly side effects could be great.
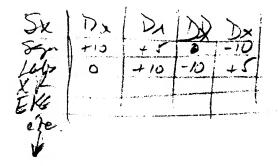
Another potential application would be to allow the review to be done elsewhere, but still protecting privacy and confidentiality. The requesting reviewer would submit the necessary identifying data and permission from a patient. The identification server would select the secret random number assigned to that specific patient, select the required information and delete identifying data (i.e. names, nicknames, initials, birthdays, addresses, etc) and submit anonymous records to the reviewers. Of course, a single patient request would be difficult to disguise, but the assumption is made that multiple charts would be requested by any one reviewer, diminishing significantly the chance of individual identification. Because of this potential breach of confidential information safeguarding, the first alternative is more secure and the preferred one.

The application of this structure would reduce substantially the present cost of service, review, delays and animosity in the health care arena. By acting as a neutral intermediary and at the same time facilitating services for the user and cost controls for the payor, fee for the service should not raise significant opposition.

CLAIMS:

1-A method for utilizing the information contained in the LMH system to verify that services billed by hcps to an insurance company have indeed been performed. The method takes advantage of the fact that the records belongs to the patient and all information regarding encounter with any hcp has to be recorded into this record, and of the fact that patient who receives the services is asked to verify encounter and services rendered. The method preserves confidentiality and security of the records, since the analysis and verification is performed by computer.

Potential Solution to Dx problem.

- Compose a grid where one axis is Sx, sgns, labs, etc & the other axis is Dx
  ∴ @axis can be ∞
- For a Dx a Sx, sgn, etc can have a given value.
- The value can vary from (t) to (t) according to knowledge + experience

∴ any Sx, sgn, etc will have ± values across an ∞ array of Dx.

- Of Dx one column but Sx, sgns we axis
  ⇒ the ∑ of a column should produce a value.
  ⇒ rank potential Dx by highest to lowest ∑ value.
- Iteratively evaluate a pt's condition or a string of new anytime new Sx, sgn, etc are added.
- reorganization of ranking based on new knowledge.

Sx	Dx	Dx	Dx	Dx
Sgn	+10	+5	~~+~~	-10
Labs	0	+10	-10	+5
XR				
EKG				
etc. ↓				

(Assign a # value to an item, i.e. (-10) to +10) depending on importance (~~positive~~ or negative) of that item in a Dx entity. A (-10) would indicate impossibility ("no way, no means, Doc"); a (+10) would indicate absolute certainty of item's presence, a (0) would be neutral.

Potential Solution to ~~the~~ Information passing dilemma

- If we assume that a word + a meaning refers to one unique item in the world.

- then every world item can have a unique identifier.

- the identifier (ID) can be a line of numbers, letters, symbols or a combination of 2 or more of these elements

- length of ID can be ∞

$\Rightarrow$ this allows the creation of cognitive neologisms; string of words that ~~mean or mean~~ one unique world item.

$\therefore$ the ID may ~~can~~ refer to any thing in the world

A descriptive word-string can then become a unique ID which permits computers to utilize it.

$\Rightarrow \therefore$ Programs can be written to ~~attach~~ ID to a word, string of words, phrase or documents.

$\Rightarrow$ Any EMR can then be handled electronically intelligently.